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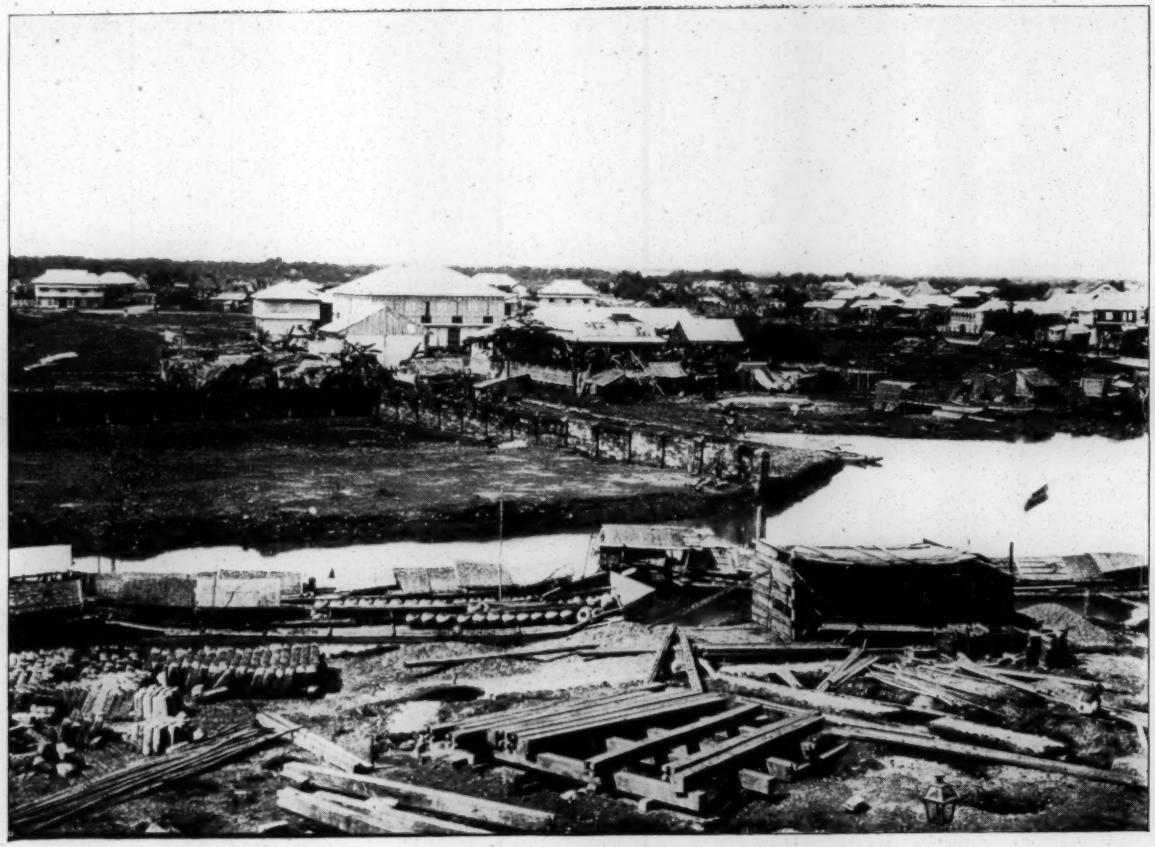

OUTSKIRTS OF MANILA

THE

National Geographic Magazine

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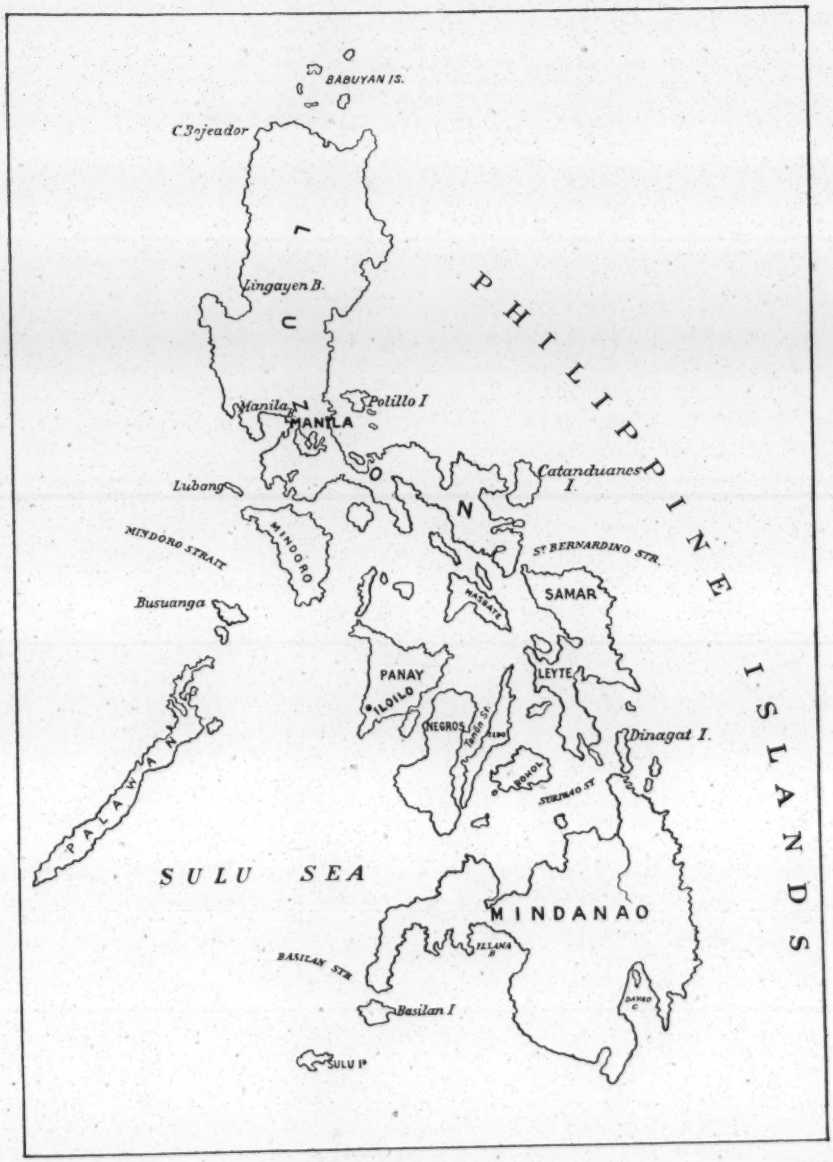
THE PHILIPPINE ISLANDS

By F. F. HILDER

To the southeast of the continent of Asia lies a vast archipelago, of which a considerable portion is occupied by the group called the Philippine islands, or, in Spanish, Islas Filipinas. The number of islands included under this denomination is not definitely known, and this uncertainty has given rise to some rather wild guessing. Some English authorities state the number as six hundred, while a late consular report issued by the Department of State places the number at two thousand, but this may perhaps be intended to include the Marianas, or Ladrones, the Carolines, and the Pelew islands, as all of these are included under the jurisdiction of the governor-general of the Philippines. Some of the Philippines are mere islets, too small for occupation, but others are important in size and resources and are very populous. The principal islands rank according to size in the following order: Luzon, Mindanao, Palawan, Samar, Panay, Mindoro, Leyto, Negros, Cebu, Bejol, and Maskato. The northern island, Luzon, on which Manila, the capital, is situated, is the largest, having an area of about 41,000 square miles, corresponding in size to the State of Ohio. Mindanao, the southernmost island, contains about 37,500 square miles. As no accurate survey of even the larger islands has ever been made, it is impossible to make a definite statement as to the aggregate land area of the group, but the most reliable estimate is 114,356 square miles, which is equal to the combined area of New York, New Jersey, Pennsylvania, and Maryland.

The islands are situated directly on the line of volcanic energy which extends from Japan to Java, and volcanic forces have



MAP OF THE PHILIPPINE ISLANDS

largely contributed to their formation and shaping, as is testified, not only by the existence of active volcanoes, but by the still larger number of mountains which show evidences of former igneous activity, the traces of its effects on the surrounding country, and the abundance of thermal springs which are found in different localities, in which the temperature of the water ranges from 180° Fahrenheit to the boiling point. Although situated in a region peculiarly adapted to the growth of corals, they do not exist to any great extent on the coasts of the Philippines. Occasional traces, sometimes amounting to a fringing reef, are met with in favorable places along the west coast of Luzon and some of the other islands of the group. This scarcity of coral formation may be accounted for by the presence of volcanic fires and the occasional deluges of hot water emanating from their outlets, which prevent the growth of the polyps. All the islands are generally hilly and mountainous, but none of the summits much exceed 8,000 feet in height. The loftiest peaks are, perhaps, Apo and Malindang, in Mindanao; Halcon, in Mindoro, and Mayon, in Luzon. The latter is an active volcano, which has been the scene of several disastrous eruptions within the past hundred years.

As a consequence of these subterraneous forces, earthquakes are frequent and violent. An English writer says:

"The destructive ravages and changes produced by earthquakes are nowhere more remarkable than in the Philippines. They have overturned mountains; they have filled up valleys; they have desolated extensive plains; they have opened passages for the sea into the interior and from lakes into the sea."

That this is not an exaggeration is proved by historical records, which contain many accounts of such disasters since the Spaniards first occupied the territory, and proofs that they have produced great geographical changes.

"In that of 1627 one of the most elevated of the mountains of Cagayan disappeared. In 1675 in the island of Mindanao a passage was opened to the sea and a vast plain was emerged."

The more recent of these convulsions occurred in 1863 and 1880, both of which caused great destruction of property. In the former the loss of life was greater, but the more massive buildings in the old city of Manila suffered more during the latter, the cathedral and many other edifices being completely wrecked.

As a result of these repeated experiences, the style adopted in the erection of buildings, especially of the better class of dwellings and stores, has been modified to meet these emergencies; consequently the liability to destruction and damage has been lessened. The islands are all well watered by rivers, streams, and lakes. Many of the latter are of large size, particularly the Laguna de Bay (Bay lake), which nearly bisects the island of Luzon. Mindanao derives its name from an Indian phrase indicating the abundance of its lakes.

NEW CATHEDRAL AT MANILA, WITH RUINED TOWER OF OLD STRUCTURE

By courtesy of Leslie's Weekly

In consequence of the island of Luzon having the capital and a very large proportion of the white residents located upon it, the interior is better known than that of many of the other islands. Its scenery, although mountainous, is charmingly diversified and will compare favorably with any of the countries of farther Asia. Its large lakes and rivers, broad plains and fertile valleys, teeming with luxuriant tropical vegetation and noble forests, add both to its beauties and productive capabilities.

ANIMALS

If a land connection ever existed between the Philippines and Borneo, the separation must have occurred long ages ago. It

is true that the strait between them is narrow, but the water is very deep, and the larger animals included in the fauna of Borneo are not found in the Philippines, especially the elephant, tapir, and orang-outang. There are no beasts of prey in the Philippines except a small one—"el gato del monte"—a species of wildcat, and even that is not very plentiful. The wild animals are buffalo—not the bison of our western plains, miscalled buffalo, but the East Indian animal—deer, hogs, which are doubtless descendants of domesticated animals that have taken to wild life in the woods, and monkeys. There is also report of the existence on the island of Mindoro of a mysterious animal called tumarao, which the natives describe as a cross between the buffalo and deer.

The tamed buffalo, called the water buffalo, from its delight in wallowing in water and mud, is the most useful of the quadrupeds and is universally employed in agricultural work and the transportation of freight, both as a pack and draft animal. Goats, sheep, dogs, and cats are plentiful. Flying squirrels are numerous in the forests, and bats of enormous size, frequently measuring five or six feet from tip to tip of their wings.

Snakes, lizards, and other reptiles abound; also insect pests of various kinds, among which are the destructive white ants, mosquitoes, tarantulas, and other spiders of enormous size.

Pigeons and domestic fowls are abundant, and there is an immense variety of parrots and other wild birds, many of which are comparatively little known, even by name, to American or European ornithologists.

CLIMATE

The extreme length of the Philippine group being from north to south, their northern extremity reaching nearly to the northern limit of the tropical zone, causes considerable variety of climate, although the general characteristics are, of course, tropical. On the western side of Luzon, where Manila is situated, the hottest season is from March to June, the greatest heat being felt generally in May, before the rains set in, when the maximum ranges from 80° to 100° in the shade. The coolest weather occurs in December and January, when the temperature falls at night to 60° or 65° and seldom rises in the day above 75°; in fact, during the months from November to February the sky is bright, the atmosphere cool and dry, and the weather in every way delightful.

Owing to the insular conditions, this region enjoys an advantage which does not extend to tropical continental areas of similar elevation—that is, a considerable range in temperature during the twenty-four hours, averaging from 10° to 20°, which frequently affords the relief of a tolerably cool night even in the hottest season.

The following table of temperature, rainfall, etc., at Manila has been compiled by Prof. H. A. Hazen, of the United States Weather Bureau, from observations made at the Observatorio Meteorologico de Manila:

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Annual.
Temperature (degrees F.):													
Mean monthly	77	78	81	83	84	82	81	81	81	80	79	77	80
Warmest month	79	81	82	85	87	85	82	82	82	82	81	80	82
Coolest month	74	76	79	81	82	81	79	80	79	79	77	75	79
Highest	91	96	96	99	100	98	95	94	94	95	94	92	100
Lowest	60	61	65	66	71	70	70	69	71	69	63	60	60
Humidity:													
Relative, per cent	77	73	71	70	75	80	84	84	85	82	80	80	78
Absolute, grains per cubic foot	7.75	7.60	7.90	8.42	9.27	9.39	9.33	9.53	9.33	9.24	8.59	8.06	8.75
Wind movement in miles:													
Daily mean	98	115	132	145	144	138	182	165	192	111	94	93	134
Greatest daily	152	187	220	229	236	361	267	264	282	196	164	153	204
Least daily	66	72	82	92	68	96	110	79	69	48	67	59	95
Prevailing wind direction	n.e.	e.	e.	s.e.	s.e.	s.e.	s.w.	s.w.	s.w.	n.e.	n.e.	n.e.	.....
Cloudiness, per cent	45	37	35	32	47	65	74	68	72	58	54	53	53
Days with rain	4.3	2.2	3.4	3.5	9.2	15.4	22.1	19.8	20.7	14.4	11.3	8.4	135
Rainfall in inches:													
Mean monthly	1.15	0.47	0.65	1.11	4.30	9.68	14.70	13.88	15.01	7.47	4.92	2.09	75.43
Greatest monthly	7.59	1.97	3.94	5.37	10.11	25.81	29.71	43.20	61.43	24.65	15.27	13.67	120.98
Least monthly	0.02	0.00	0.00	0.00	0.00	0.98	5.28	5.15	2.00	0.90	1.17	0.01	35.65

Rainfall record for 32 years, 1865–1896; remaining data for 17 years, 1880–1896.

The seasons vary with the monsoons or trade winds, which blow from the northeast from November to April, and from the southwest from May to October, and produce what are generally called the dry and wet seasons; but there is no abrupt change from one to the other. Between those periods there are intervals of variable weather.

The Spaniards describe the seasons as—

> "Seis meses de lodo,
> Seis meses de polvo,
> Seis meses de todo;"

six months of mud, six months of dust, and six months of everything.

The northern islands lie in the track of the typhoons, which develop in the Pacific and sweep over the China sea from northeast to southwest during the southwest monsoon. They are liable to occur at any time between May and November, but it is in the months of July, August, and September that they are most frequent. In the early part of the season it is the northern part of the region subject to these storms that feels their greatest force. As the season advances they gradually work southward, so that the most dangerous time in Manila is about the end of October and beginning of November. They never pass further south than about 9° north latitude; consequently all the territory south of that line is exempt from their ravages. Sometimes the typhoon is of large diameter and travels slowly, so far as progressive motion is concerned; at others it is of smaller dimensions, and both the circular and progressive motions are more rapid; but they are always storms of terrific energy, frequently causing terrible devastation and destruction of crops and property on shore and of shipping on the sea.

Thunder storms, often of astonishing violence, are of frequent occurrence in May and June, before the setting in of the southwest monsoon and commencement of the rainy season. During July, August, September, and October the rains are very heavy; the rivers and lakes are swollen and frequently overflow, flooding large tracts of the lower-lying country. The average rainfall in the neighborhood of Manila is stated to be from 75 to 120 inches per annum, and there the difference between the longest and shortest day of the year is only 1 hour 47 minutes and 12 seconds.

For a tropical climate, that of the islands may be considered healthful for people of the white race, and even for natives of northern regions visiting for the first time a tropical country if they pay ordinary attention to hygienic laws, particularly to cleanliness, and temperance in eating and drinking. In the majority of cases when foreigners suffer from change of climate in this or most other tropical countries the cause can be traced to their own imprudence and careless habits of life. The immoderate use of fruits, although novel and delicious, particularly after a long sea voyage, should be avoided, as they tend to disarrange the gastro-intestinal functions and produce dysenteric and diarrheal diseases, which are those most to be feared by newly arrived strangers. Alcoholic liquors, if used at all, should be taken with extreme moderation. Animal foods and fats, which

are heat-producing, should be used sparingly and care be taken to provide against sudden changes of temperature by proper clothing. If these precautions are followed until he becomes thoroughly acclimatized, there is no reason why any person of good constitution should not enjoy good health.

Elephantiasis and leprosy prevail to some extent, and biri-biri is also common and fatal among the natives. Typhoid fever is also prevalent at times, but the white inhabitants seldom suffer from it or any of the other diseases which affect the natives. This immunity is due, without doubt, to better nutrition and sanitary conditions in their dwellings.

FOREST PRODUCTS

In estimating the natural riches of the islands the forest growths form an important factor. Ebony, cedar, ironwood, sapan wood, logwood, and gum trees abound, and in addition to these familiar trees there are hundreds of other varieties not generally known, even by name, which produce useful and ornamental woods available for many purposes. Gutta-percha is found in some localities, and the tall and graceful cocoanut palm, *Cocos nucifera*, is universal and contributes in no small degree to the comfort and prosperity of the natives. Its trunk, branches, leaves, fruit, shell, and husk are all turned to account. It produces fruit when seven years old that forms an important article of diet. It is eaten when the nut is young or at that stage when the shell is just formed, in a thin layer that can be cut with a spoon. When the fruit is mature or in the condition in which it is brought to our markets, it is valued only for its oil. To obtain that, the nut is broken and the meat scooped out and boiled in a large pan. As the oil rises to the surface it is skimmed off. When first made it has a rich, sweet taste and is used for culinary purposes and hair-dressing, but after a few days it becomes rancid and is used only for lighting and lubricating. Throughout the islands it was the only substance used for lighting until the introduction of kerosene, but it is still in almost universal use by the natives, particularly in the interior, not only from motives of economy, but from its being so easily manufactured or procured.

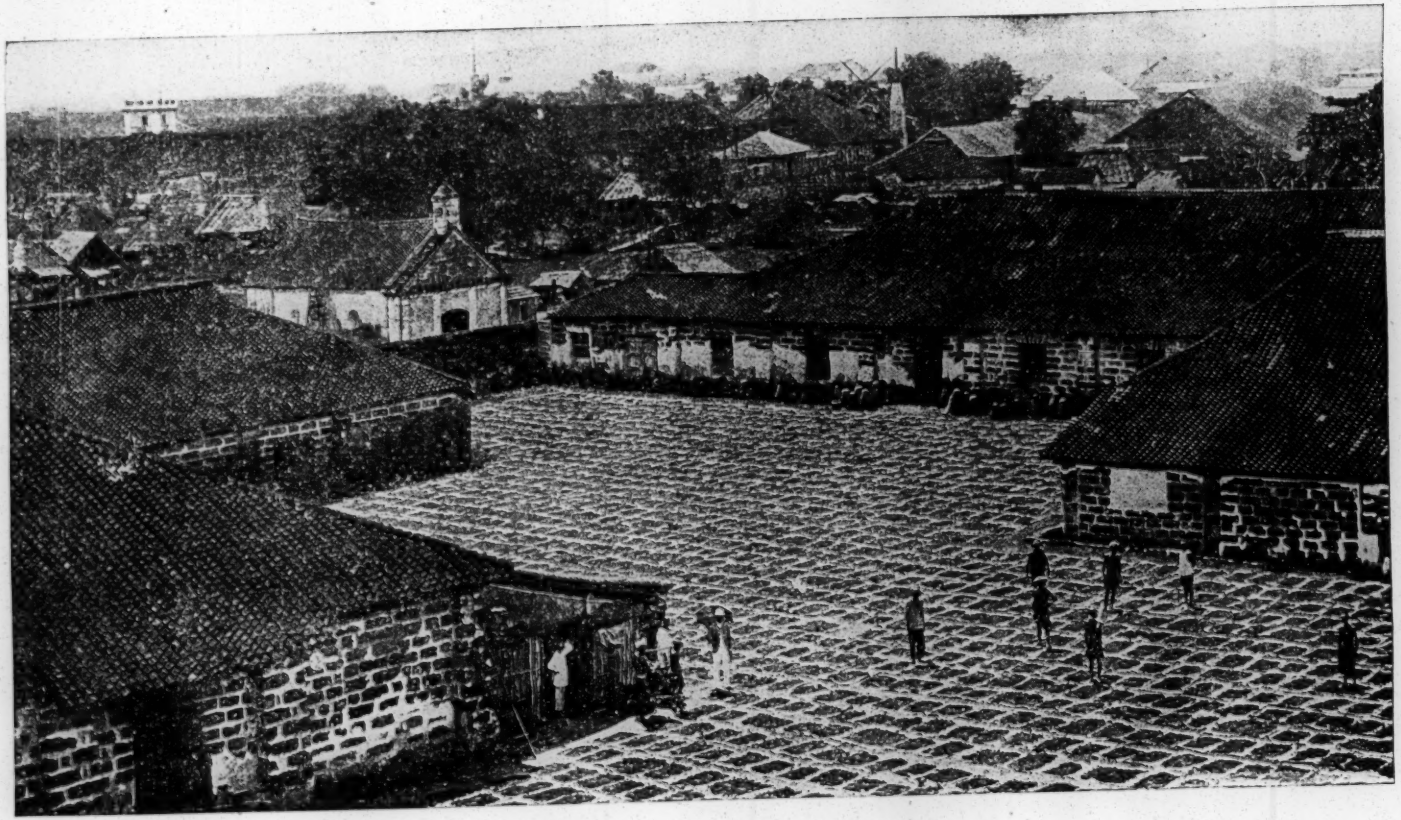
Of all the indigenous vegetal products, the bamboo, which, although botanically a grass, is practically a tree, is most plentiful, useful, and ornamental. It is scattered everywhere in profusion, and is always found near native habitations. It is put

to an infinity of uses, from the construction of bridges and dwellings to the manufacture of furniture, domestic utensils of all kinds, pipes for conveying water, musical instruments, mats, fences, and scaffolds—in fact, the roots, trunks, branches, and leaves are all utilized. The varieties of bamboo are almost innumerable, some attaining a height of fifty or sixty feet and varying in diameter from eight to nine inches, while others are as small as a rattan. The forests also abound in the various classes of canes, rattans, and others of the calamus family, which are important and useful and serve for a great variety of purposes.

The Areca palm grows to about the same height as the cocoanut tree, and produces a nut about the size of a small hen's egg. It is called bonga by the natives, and the quantity used is enormous—men, women, and children all chew it. A piece of the nut is wrapped in a leaf of the betel pepper, which is smeared with shell lime made into a paste with water. In the city of Manila alone there are hundreds of places devoted solely to the sale of this article prepared ready for use, and it can be found on sale in every town and village.

AGRICULTURE

There is a great similarity between the agricultural products of Cuba and the Philippines—in both sugar and tobacco are the great staples—but the latter islands possess an unique product which hitherto it has not been found possible to raise successfully elsewhere, although attempts have been made to introduce it in Borneo, Cochin-China, the Andaman islands, and other places. It is known commercially as Manila hemp, but this is a misnomer, as it has no relation to the hemp plant. Its native name is abacá, and it is the product of a species of plantain or banana, *Musa textilis*, which differs very slightly in appearance from the edible variety, *Musa paradisiaca*. Its fruit, however, is small, disagreeable to the taste, and not edible. It grows to the height of twelve to fifteen feet. There is evidently some peculiarity of soil or climate, or of both, which enables these islands to retain a monopoly of this fiber which has become of such immense commercial value. It grows best in hilly or mountainous districts, and particularly in the volcanic regions in the eastern parts of the islands. It is hardy and suffers little from any enemy except drought. It has the advantage of being a perennial crop, like its fruit-bearing relative, month after month young shoots springing up from the original root.



DRYING SUGAR AT A FACTORY — ISLAND OF LUZON

By courtesy of Leslie's Weekly

In starting a plantation the timber and undergrowth are cut down and allowed to lie until dried by the sun, when they are burned and the young sprouts or suckers are planted. Nothing more is ever done in the way of cultivation except to cut down weeds and extraneous growths to allow access to the plants and to replace those that may die from accident or old age. They reach maturity in about three years, and should then be cut, as at that age they yield the best fiber. If they are cut earlier the fiber is short and lacking in strength, and if allowed to grow too old before cutting it becomes harsh, woody, and brittle. A large quantity of land is required to form a successful plantation, as the plants occupy considerable room, and it requires the product of five or six acres to produce a ton of fiber at each cutting.

The method of decortication is as rude as the agricultural process. It is true that many machines constructed on scientific principles have been experimented with, but none so far have proved satisfactory, and the crude native implement is still the only one in use; it consists of a rough wooden bench with a long knife-blade hinged to it at one end and connected at the other to a treadle. Strips of the plant are drawn several times between this blade and the bench, which removes the pulp and outer skin, leaving the fiber, which is then cleansed by washing, dried in the sun, and packed for shipment.

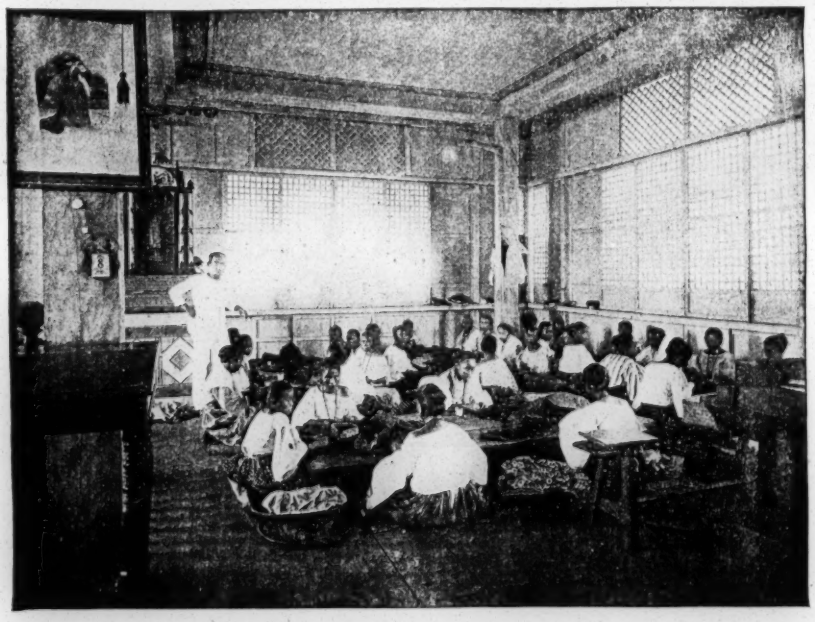
It is one of the most useful fibers known to commerce. Beside its value for making rope and cordage, it is extensively used in the United States for binding twine for harvesting machines. Nearly one million bales are exported annually, of which forty per cent comes to the United States.

Sugar is grown very extensively. The cane, *Saccharum violaceum*, is not of the same species as that cultivated in the Western hemisphere, but it is of the kind common throughout Malaysia and Polynesia. It is either a native of the archipelago or was introduced in prehistoric times. Several varieties are raised on the islands, some of which are used as food for man and animals and others for sugar-making. They are all rich in saccharine qualities, but the greater part of the sugar produced is coarse and of poor quality, and brings a low price in consequence of slovenly methods of cultivation and manufacture and the lack of high-grade machinery, such as is used in Cuba and the United States. The quantity produced, however, is very large, supplying all that is used for home consumption and furnishing for export annually an average of 250,000 tons, which could be indefinitely in-

creased by the introduction of improved machinery, skill, and capital.

Tobacco is an important crop, and Manila cheroots and cigars are as famous and highly appreciated east of the Cape of Good Hope as the Havana product is among western nations. The quantity of the leaf raised is very great, but its cultivation is capable of much further development. It has been estimated that 20,000 or more persons find employment in its preparation and the manufacture of cigars, exclusive of those who raise the leaf. In one factory alone in the Binondo suburb of Manila about 9,000 young women and girls are employed. Tobacco was made a government monopoly by Captain-General José Basco y Vargas in 1781, and remained so until July 1, 1882, when the trade was thrown open.

Rice is largely grown, but its use is so general and the demand for home consumption so great that little is left for exportation, although a market could always be found in China for any amount that might be sent there. There are several varieties grown in the islands, but they may be classified under two heads: the upland or mountain rice and the water rice. The upland rice



GIRLS MAKING CIGARS

By courtesy of Leslie's Weekly

NATIVE AGRICULTURE OF PHILIPPINE ISLANDS — PLOWING

By courtesy of Leslie's Weekly

is sown broadcast on the hill lands after plowing and harrowing the soil. It matures in about three to four months and is harvested ear by ear. The water rice is sown later in the year, after the rains have commenced and the low land has become thoroughly water-soaked. The seed is sown in the mud and water, and in about six weeks the young plants are transplanted to the rice fields, which are kept thoroughly irrigated.

The cacao bean, *Theobroma cacao*, was introduced into the islands from Mexico by the Spaniards. It found a congenial home, as it grows luxuriantly and produces good crops, from which excellent chocolate is made, but principally for home consumption.

Corn, which was also brought to these islands from the Western hemisphere, is grown to some extent, as are also cotton, vanilla, cassia, ginger, and pepper. Coffee of excellent quality has also been produced, but of late years the crops have not been very successful, in consequence of disease among the trees.

All fruits suitable to the climate are plentiful, including the orange, tamarind, guava, and pineapple.

The mango grown in the Philippines is considered of very fine quality. The tree, *Mangifera indica*, is large and thickly branching, with bright green leaves. The fruit before it ripens is so acid that it forms a good pickle by merely preserving it in

salt water, but when ripe it changes from green to bright yellow and has a rich aromatic flavor.

The mangostin, one of the most delicious of all tropical fruits, is grown in Mindanao and some other of the southern islands of the group. The tree on which it grows resembles a pear tree in size and shape, the reddish brown-skinned fruit is spherical in form, the outer rind is thick and tough, enclosing a white center, which is slightly sweet, but of most delicious and delicate flavor. This fruit is confined to the Malay peninsula and eastern archipelago, and all efforts to raise it elsewhere have failed.

Of all the native fruits, however, the banana is the most prolific and useful to the people, giving them a larger amount of nutritious food from a given area of land than any other crop, with a minimum expenditure of labor. Bananas as used in this country have been gathered while immature and have been bruised and heated in transportation; consequently they bear but small likeness to the fruit in its tropical home. A traveler who has partaken of a meal in a native dwelling in the Philippines, consisting of rice, boiled as only the natives can cook it, and ripe bananas full of delicious juice, melting in the mouth like cream, with the cool and fragrant water of the cocoanut as a beverage, can appreciate how much nature has done in those regions to supply the wants of man and how little of human labor is required to support life.

MINERALS

From what is known of the mineralogy of the islands, there is no doubt that a scientific geological survey would prove that they are rich in ore deposits of many kinds. Gold has been found in several of the provinces, but chiefly in the more mountainous and inaccessible localities, many of which are occupied by independent tribes that have never submitted to Spanish rule; but that the auriferous formations extend over a wide area on the island of Luzon is proved by the fact that in the alluvial deposits of every stream on the Pacific side some color of gold can be found. The islands of Mindanao and Mindoro are also equally promising fields for prospectors for gold. In many places the natives have extracted considerable quantities of gold dust by washing the alluvial deposits; in others gold-bearing rock is broken by them with hammers and ground in rude mills, such crude methods of course producing but poor results. It seems remarkable that with the knowledge that gold exists the Span-

iards have not taken measures to prosecute the search for it, and to apply modern scientific means to obtain profitable results. This, however, may not appear so strange when we consider that for centuries the gold deposits of California were in their possession without being utilized.

Iron ore of excellent quality is abundant, but from lack of means of transportation and machinery it has not been found possible to manufacture iron as cheaply as it can be imported, so that whenever works have been started they have soon been abandoned as unprofitable.

Rich deposits of copper also exist, and many of them have been worked in a desultory manner by the natives, and more recently some of them have been operated by a company organized in Europe, but without any pronounced success. Galena and zinc blends have also been found. Several very promising coal-fields are known, and some of them have been utilized to a small extent, but the absence of roads and consequent expense and difficulty of transportation have proved a bar to development of this as well as of all other mineral resources. Sulphur is found in the vicinity of many of the ancient volcanoes, in quantities that would prove profitable if transportation facilities could be obtained.

MANUFACTURES

Shipbuilding is carried on to some extent, but the vessels built are principally small and intended for the coasting trade among the islands.

Considering that the Philippines are essentially an agricultural region, the manufacture of textile fabrics has attained considerable development; but it is not carried on in large establishments, and little has been done to introduce modern machinery. The looms are made of bamboo, and are of the simplest construction.

In some districts, particularly in the islands of Panay and Luzon, there are communities where almost every family possesses a loom, and in the houses of some of the well-to-do natives a number of looms may be found which are operated by hired labor. The products are principally cotton cloths, sail cloths, quilts, coverlets, etc. Coarse fabrics are also made from fibers extracted from the leaves of the sago palm, manila hemp, and other fibers. The most beautiful fabric produced on the islands is that called piña, which is made from fiber obtained from

leaves of the pineapple plant. The plants are raised especially for this purpose. Before the fruit begins to form the crown is removed, which not only prevents the formation of the fruit, but causes the leaves to grow larger; when they reach maturity they are broken from the plant and the outer skin and pulp are removed by scraping. As the fibers appear they are cautiously raised and removed one by one, and after a thorough cleansing by washing are dried in the sun; they are then assorted according to lengths and qualities by women and tied together in packages for the weaver's use.

The weaving is a delicate process, requiring the greatest care on the part of the operator, and the fabric produced is so exquisitely fine that sometimes only a few inches are the result of a day's work. Sometimes silk, which is imported from China, is mixed with the anana fiber, but the plain piña is the most esteemed and is largely sent to Manila, where it is embroidered. In that city and the suburban villages large numbers of women are employed in this industry. The work is frequently of the most exquisite quality and is sold for extravagant prices. In the villages near Manila and in many other communities on the islands women are also employed in making hats somewhat similar to the celebrated Panama hats, cigar cases, and other small wares, in which they display great skill and taste. Mats are also largely manufactured, and as every one uses them to sleep on, the demand is constant. They are of various qualities, but some of them are beautiful in texture and are ornamented with colors and gold or silver threads.

Cotton rugs of handsome designs are also made in some of the islands. Horn is also softened and fashioned into bowls and other utensils. Many of the various articles produced by native workmen are remarkably artistic and beautiful, considering that all their tools and implements are of the simplest and rudest character.

COMMERCE

The earliest development of commerce between the Philippines and the outside world was in the direction of China and Japan, which gradually increased in importance. The Chinese were the founders of this interchange of products. At first their merchants came and returned each year, but as the trade increased they found it more profitable to remain permanently, and founded that Chinese commercial colony which, in spite of

occasional outbursts of fanatical persecution and of oppressive taxation, has really been the mainstay of commerce in the islands.

The earliest efforts of the Spaniards after obtaining possession of the country were directed to securing for Spanish subjects a monopoly of the trade, precisely as they did in their American possessions, and to this end for a long time only a single ship was allowed to make the voyage each year from Mexico to the Philippines and from the Philippines to Mexico. These ships, called by the Spaniards the Acapulco ships and known to the English as the Spanish galleons, were equipped as ships of war and commanded by officers of the navy. This monopoly insured enormous profits to the adventurers who supplied the cargoes, but the whole business was permeated by corruption and roguery of the worst description. This condition existed, but with diminishing success, until 1815, when the last of these vessels was dispatched from Acapulco, as their monopoly had been gradually absorbed by a company chartered in Spain in 1784, called "Compañia de Filipinas," which by opening direct commerce with Spain caused the decline and final extinction of the trade via Mexico. This company, however, in consequence of bad management and injudicious ventures, did not prove successful and passed out of existence at the end of fifty years. In the meantime some relaxation of the narrow-minded exclusive system had taken place; in 1789 the port of Manila was opened to foreign vessels, and in 1809 an English firm received permission to establish a business house in Manila, being the first foreigners to receive such concession. In 1814 this permission was made general.

It is, however, only since 1834, when the operations of the Philippine company came to an end, that greater freedom of intercourse and larger introduction of foreign capital and business methods has affected materially the development of the great natural resources and a foreign commerce has resulted which, although far smaller in amount than it ought to be, is a fair indication of what it might and would become if the country should be controlled by a liberal and progressive government. The statistics published in another part of this issue will give a good idea of the progress and present condition of the commerce of the islands.

Internal commerce as well as the export trade suffers from the lack of facilities for transportation. This is more marked

during the rainy season, when the stormy weather which accompanies the southwest monsoon renders coastwise navigation dangerous to coasting vessels, and land carriage is impeded by bad roads and the absence of bridges, necessitating the floating of goods across the streams on rafts, while facilities for personal travel have been confined to horseback or to uncomfortable two-wheeled vehicles called *carromatas*, over roads execrable in the dry season, but which in the wet season become seas of mud, only to be traversed by a rude sledge drawn by buffaloes—in fact, sleighing on the mud in place of the snow of northern climes.

But in this direction also there is a hopeful sign of progress, as the first railroad has been built and is in operation from Manila to Dagupin, 123 miles in length, connecting the capital with the rice-growing districts of Pangasinan. It is a single-track road, well and substantially built, and its earnings have been sufficiently remunerative to encourage an extension of railroad facilities whenever the islands may enjoy the blessings of peace and liberal government.

The traveler in the interior of Luzon will find no hotels nor inns for his accommodation, but every village has a public building—often, indeed, a very rude structure and sometimes a mere hut—where he is entitled to shelter and where he can obtain food, frequently of poor character, at a fixed tariff rate. Wherever a priest or a convent is located he is sure of more commodious quarters and better fare.

HARBORS

The immense coast line of the islands contains a great number of good harbors, but in consequence of the exclusive policy of the Spanish government in closing them to foreign commerce very little is known of them except to coastwise navigators. The foreign trade is confined chiefly to Manila, Iloilo, Cebu, and Sual. Zamboanga, on the island of Mindanao, is also an open port, but the amount of business transacted there is insignificant.

The bay of Manila, one of the finest in the world, is about 120 miles in circumference, with deep water and very few dangers to navigation. The entrance is divided into two channels by the islands Corregidor and Caballos, the northern about two miles in width and the southern five miles. The anchorage for large vessels is good within a short distance from the mouth of the river Pasig, on which the city of Manila is situated and which enters the bay on its eastern side, where it is prolonged into the

bay by two piers, which terminate the one in a small fort and the other in a light-house. During the stormy weather of the southwest monsoon this anchorage off the city is not considered very safe, but there is good shelter for ships at Cavite, which lies about eight miles southwest of Manila in a direct line by water or fourteen by land. Here the Spaniards have a naval establishment, with a marine railroad capable of taking from the water vessels of 2,000 tons displacement; a dock for gunboats and small vessels, and shops containing machinery and appliances for repairs; also an arsenal and hospital.

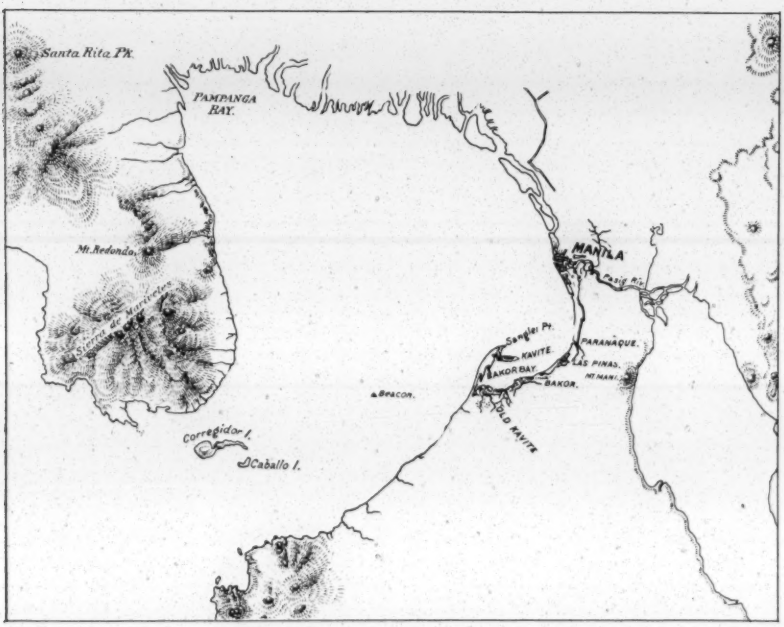


CHART OF MANILA BAY

Iloilo, the second port in importance, is on the island of Panay, near its southeastern extremity, distant about 250 miles in a direct line from Manila. The approach to the harbor is by a channel between a sand bank and the island of Guimaras, which lies about two and a half miles from the shore. The anchorage for large vessels, which is well protected and naturally good, is outside the mouth of the Iloilo river, but small vessels enter it and discharge their cargoes at the wharves of the town which faces both on the sea and on a bend of the river.

CITIES AND TOWNS

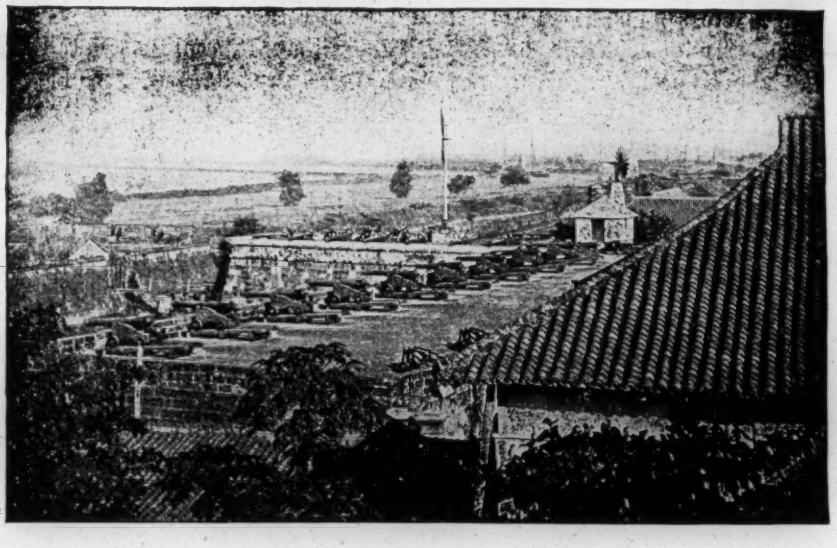
Although there are innumerable villages and many considerable towns in the Philippine islands, the restrictive policy of Spain and the centralization of civil, military, and ecclesiastical power at Manila have prevented the growth of any other great community; consequently it is the only important city.

The geographical conditions, principal among which is the connection of Manila bay with Lake bay by the river Pasig, affording facilities for communication with the interior, led to the foundation of a settlement at the mouth of the river in prehistoric times, as when the Europeans first landed there they found a native town, enclosed by a stockade for defense, called by the natives Maynila.

Although the name Manila is generally applied to the city on both sides of the river Pasig, which forms the metropolis of the islands, it is only the old walled city or fortress situated on the left, or south, bank of the river to which the designation was originally applied. It was founded in 1581, and King Philip III of Spain gave it armorial bearings and conferred on it the title of "La muy noble ciudad," the very noble city of Manila. It is a typical old-fashioned Spanish town, surrounded by ramparts, and has seen very little alteration or improvement during

NATIVE VILLAGE OF ALBAY

By courtesy of Leslie's Weekly



SPANISH FORTIFICATIONS NEAR MANILA

By courtesy of Leslie's Weekly

the past two hundred years. It contains seventeen streets, laid out at right angles. The governor's palace, the cathedral, and archiepiscopal residence face on the plaza, or public square, which is adorned with magnificent tropical shrubbery and flowers, surrounding a statue of Charles IV, which stands in the center. The barracks for the military forces, the government offices, and custom-house are all located in this old town; but as there is very little business or commercial activity there, it is intensely dull and life there is monotonous. Just outside the fortifications is a broad road called the Calzada, which is to Manila what the Paseo de la Reforma is to the City of Mexico, Hyde park to London, or the Champs Elysées to Paris. Every fine evening from 5 o'clock to dusk it is crowded with carriages and equestrians, seeking relief in the cooler evening air after the heat of the day, and society enjoys the luxury of seeing and being seen.

Near the river stands a stone column erected to the memory of Fernando de Magalhæs, the Portuguese navigator and discoverer of the islands. It stands on a marble pedestal, and is surmounted by a bronze sphere, and decorated midway with dolphins, anchors, and laurel wreaths.

On the opposite side of the river, and connected with the old city by several bridges, is the newer town, which is the commer-

cial metropolis, called by the Spaniards Binondo, but is now universally included in the designation Manila. It is full of animation and activity and forms a startling contrast to its sleepy old neighbor across the river; in passing a bridge from the old city the passenger seems to step at once from the sixteenth to the nineteenth century. Here all is life and bustle; the principal street, called the Escolta, is lined with stores and business places of all classes, and from morning to night is thronged with a motley crowd of many races and every shade of color, while electric lights and street cars attest that the spirit of progress is gradually encroaching on the conservative ideas of the past.

In the old city and the older parts of the newer town most of the buildings were of brick and stone, with tiled roofs, but repeated shocks of earthquake have taught the lesson to build in anticipation of them. It is now very rare that stone or brick is used in the construction of buildings above the level of the ground. Modern houses are seldom more than two stories in height, with galvanized iron roofs supported by wooden pillars, so arranged as to allow of a certain amount of oscillation independent of the walls. The native houses are built of wood or bamboo and thatched with palm leaves; they are of course very combustible, but practically earthquake proof.

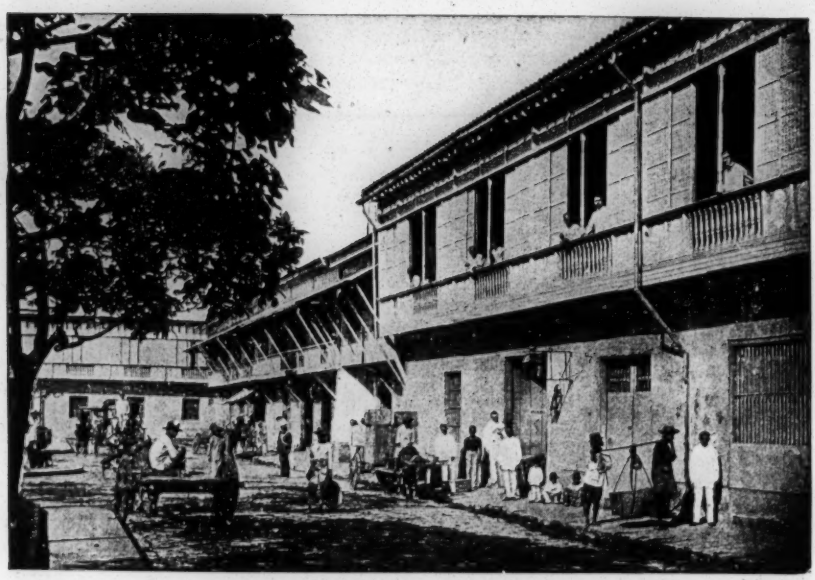
The population of the metropolis and its suburbs is about 250,000 to 300,000. Many of the suburban villages are very populous. Tondo, a short distance on the Binondo side, has upward of 30,000 inhabitants, Santa Cruz has 12,000, and Santa Ana, a pretty village where many of the wealthy citizens of Manila have country residences, contains about 7,000 people.

POPULATION

Spanish statistics are notoriously unreliable and no accurate census has ever been taken, but the number of inhabitants is about 8,000,000. The bulk of the population is of Malay origin. On their first arrival the Spaniards found part of the natives in possession of some amount of civilization. They had a written language, of which some specimens have been preserved, though of no value in throwing light on their former history, and their traditions are very few. The Spanish priests here, as in Mexico and Central America, did all in their power to extirpate all mythological and other lore that existed, and unfortunately with almost complete success; but fortunately for the inhabitants they were treated more mercifully than in most of the other newly

THE ESCOLTA — MAIN BUSINESS STREET OF MANILA

By courtesy of Leslie's Weekly



CERVANTES SQUARE, MANILA

By courtesy of Leslie's Weekly

discovered countries acquired by Spain, so that they have increased in numbers instead of being exterminated, as in many places in the Western hemisphere. This was not due, however, to any magnanimity on the part of the Spaniards, but to the fact that the great distance of the islands from Spain prevented their being overrun by greedy and cruel adventurers, as was the case in the West Indian islands and adjacent mainland.

In Mindanao and some of the other southern islands there are some pure Malays, who are Mohammedans. They are called "Moros"—Moors by the Spaniards—and at times give them as much trouble as the African Moors gave their ancestors in Spain.

There are also in the interior of Luzon and other islands many semi-savage tribes, who have never submitted to Spanish rule or to Spanish taxation, and when they escape the latter it is pretty certain that they are not under control. They are as untamed and are living as primitive a life as they were when the Spaniards landed on the islands, more than three centuries ago.

The Philippine Malays are a superior race to many other Asiatic people; they are orderly, amiable, courteous, honest, and hospitable, exceedingly superstitious, and when they profess Christianity are easily influenced by the priests. Like most tropical people, they are intermittent rather than steady workers. Their wants are easily provided for, and they take life easy. They are lacking in energy when at peace, but their hot tropical blood makes them fierce and revengeful in war. They are fond of music, dancing, and amusement of all kinds, but are born gamblers, and cock fighting is their great passion. Every native, however poor, owns a game cock, and is always ready to bet his last coin on its prowess. Every town and village has its cock-pit, and in the larger communities the spectators may be numbered by thousands. Of course, this amusement, like everything else in the Spanish colonies, is heavily taxed, and a considerable revenue is derived from this source. Advantage is also taken of the taste for gambling by running a lottery for the benefit of the government.

The mestizos or mixed races form a numerous and influential portion of the population. The descendants of Spanish fathers and native mothers are numerous. A large proportion of the merchants and landed proprietors are of this class, and most of the subordinate and clerical offices of the government are filled by them. Another element is the Chinese and half-breeds of mixed Chinese and native blood. Few Chinese women come to

the islands and the men intermarry with the native women; in their offspring the paternal type seems to absorb the maternal and to be persistent for generations. Throughout the islands, or at least in all the larger towns, the bulk of the retail trade, banking, and money-lending is in Chinese hands. They are industrious, persevering, economical, and many of them possess considerable wealth. There are probably not more than fifteen or twenty thousand Spaniards or people of pure Spanish blood who are permanent or temporary residents, and the number of other foreigners is not large. The majority of them are in Manila. The English have established a club at Sampalog, in the suburbs, which has become the center of foreign social intercourse.

NEGRITOS

By courtesy of Leslie's Weekly

HISTORY

The Philippine islands were discovered by the Portuguese navigator Fernando de Magelhæs on the voyage from which only one of his ships returned after circumnavigating the globe. He first sighted them on St. Lazarus' day, 1521, from which circumstance he named them Archipelago de San Lazaro. His first landing was on the eastern coast of the island of Mindanao. He afterwards went to Cebu, where he became friendly with the native ruler and accompanied him on a warlike expedition in which he was killed.

From this time until 1542 several expeditions were dispatched from Spain to take possession of the islands, but from a variety of causes all failed. In 1565 another expedition, commanded by Miguel de Legaspi, was dispatched by Philip II to secure the islands, which had been named the Philippines in his honor

before his accession to the throne. Legaspi made good his footing in Cebu, but afterwards transferred his headquarters to Luzon, and the city of Manila was founded in 1581. From this time the islands were gradually brought under the dominion of Spain—that is, so far as their subjection was successful, which really extended to little more than the seacoasts and such towns and villages as have been created by the Spaniards or held by their military forces or by the power of the priests. That this dominion has continued is solely from lack of organization among the natives, and risings have taken place from time to time, but have always been suppressed. The islands have also been frequently threatened from without, but have never been wholly lost to Spain since Legaspi first planted the Spanish standard on them. For a long time the attacks were made principally by the Portuguese, who were jealous of the increasing power of Spain in the Orient; later the Dutch, incited by a similar feeling, endeavored to obtain possession of the islands. These attacks, however, were never very serious affairs, and the only really dangerous invasion was in 1754, when Li-Ma-Hong, a Chinese pirate, attacked the Spanish possessions with a powerful fleet of 95 war junks, but was defeated and compelled to retreat; and again, in 1762, when the English captured the city of Manila and held it and the neighboring country until 1764, when, peace having been restored, the captured territory was returned to Spain.

The more civilized natives and particularly the half-breeds, who are sufficiently educated to crave for greater freedom, have long been in a chronic condition of discontent, induced by oppressive taxation and tyrannical rule, in which the ecclesiastics have always used their authority to support the government. This produced a crisis in 1896 and led to the serious insurrection which has been in progress, with various ebbs and flows of fortune, until the present time.

ADMINISTRATION

In Madrid there is a council of state for the Philippines, which has in charge the interests of the colony and acts as an advisory board to the Minister of the Colonies. At Manila the administration of the government has for its head and chief a governor-general. Next to the captain-generalship of Cuba, this is the most important and lucrative post at the disposal of the home

government. This jurisdiction also extends over the Mariana or Ladrone islands, the Carolines, and the Pelew islands.

There is also a lieutenant-governor, who takes the place of the captain-general in case of his death, and a council in Manila, which has a voice in all questions concerning the internal affairs of the islands. The archbishop also exerts considerable power, and the ecclesiastical authority is interwoven in all the machinery of government.

The islands are divided into provinces subject to politico-military governors or alcaldes mayores, who are generally civilians. The provinces are subdivided into districts, and these again into pueblos or parishes, over which is an officer called a gobernadorcillo, a diminutive of governor, who is elected annually by the people; but the real power in these communities is generally the priest, who not only looks after the spiritual welfare of the people, but directs their material affairs. For the imposition and collection of taxes Spanish ingenuity has been exercised to the utmost; but the basis of the financial system in the Philippines is the poll tax, which every adult, both male and female, under sixty years of age has to pay, and unhappy is the lot of the native who fails to meet the demands of the tax-gatherer. He is arrested and imprisoned or deported to a penal settlement, and his family, if he has one, is left to shift for itself.

RELIGION AND EDUCATION

The Roman Catholic is the established church in the Philippine islands, which contain one archiepiscopal see and three bishoprics. Most of the ecclesiastical authority is in the hands of the various religious orders—Dominicans, Augustines, Franciscans, etc.—who are the real rulers of the country, as their power among the natives far exceeds that of the civil or military authorities, and of this power they are very jealous, as is evidenced by the long record in the history of the islands of bitter controversies between the church and the civil authority and the quarrels of the religious bodies among themselves in their efforts to maintain ascendency. There is no doubt that among the priesthood there are many devout, sincere men, who do their duty faithfully and devotedly and exert an immense and beneficial influence on the natives under their charge; but, on the whole, religious affairs on the islands are behind the age and would be more useful to the people, who are naturally devout, if they were

infused with the more modern ideas and methods of the Church in Europe and America.

Education is much neglected. Both the institutions for higher education and primary schools are antiquated in their methods and altogether behind the times, and although in nearly every town and village that is under the control of the government a school may be found, neither the quantity nor quality of the instruction it imparts is satisfactory.

NOTES ON SOME PRIMITIVE PHILIPPINE TRIBES

By Dean C. Worcester,

University of Michigan

Should the Philippine islands become a permanent possession of the United States or of any other civilized nation, the problem of giving them good government and of developing their enormous latent resources will be by no means a simple one, although it will, in my judgment, be one that will richly repay successful solution. Spain has never seriously attempted to solve it. From the time of its discovery until now the archipelago has been one vast plundering ground for her hungry officials. She has conquered so far as greed of gain made conquest desirable or safety demanded it, but there she has stopped.

Although it is 377 years since Magellan discovered the Philippines and 334 years since Legaspi began his active campaign against the islanders, there still remain in the great islands Luzon and Mindanao, as well as in Palawan, Mindoro, and the highlands of Negros and Panay, tribes which are as independent of Spain as they were when the eyes of the famous discoverer of the passage from the Atlantic to the Pacific first rested on the mountain peaks of Mindanao.

It was primarily in search of rare or new birds and mammals that I visited the Philippines, and as that necessarily took me into the wildest and least explored islands, I was repeatedly thrown in contact with representatives of these slightly civilized or wholly savage tribes. While it would be idle to attempt to give within the limits of the present article any comprehensive account of even those savage peoples among whom I and my companions actually lived, brief notes concerning the more im-

portant of the tribes in question may not be entirely without interest at the present time.

Without doubt the most primitive of Philippine peoples are the Aëtas or Negritos, a race of blacks of almost dwarfish stature, with flattened noses, thick lips, and closely curling black hair. They are believed, and with reason, to be the true aborigines of the islands, who even at the time of the Spanish conquest had begun to go to the wall in the fierce struggle for existence which was then being waged between them and the encroaching Malay

CHURCH, CONVENTO, AND WATCH TOWER — DUMAGUETE, NEGROS ISLAND

tribes on the one hand and between the mohammedan and pagan Malays on the other. At present they are well nigh extinct and in a fair way to become entirely so. They seem to be confined to the higher mountain ranges in Luzon and Negros, although it is said that a few of them still exist in the mountains of northwest Panay, and they may yet be discovered in Mindanao. We encountered them but once. They wander through the forest, living for the most part on what they can pick from the trees or dig out of the ground, although the men sometimes make use of bows and arrows or rude lances in hunting. They sleep wher-

ever night overtakes them, often without troubling to build so much as a leaf shelter. They are a sickly, wretched set; their birth-rate is said to be steadily falling off, and they must be regarded as a rapidly disappearing race.

The remaining Philippine tribes, whether pagan, mohammedan, or christian, are of Malay extraction, although in some cases there has doubtless been an admixture of Japanese, Chinese, Negrito, or even Papuan blood.

THE MANGYANS OF MINDORO

The most interesting of the Malayan tribes encountered by us were the Mangyans, who people the interior of Mindoro. Although its capital is distant but 120 miles from Manila, Mindoro is one of the least known islands in the archipelago, its pestiferous climate and the unsavory reputation of the renegade Tagalogs who inhabit its coasts having combined to discourage exploration, while there has been little to encourage exploration on the part of the Spanish, for the Mangyans have nothing to steal and could not well be taxed.

Mindoro was formerly known as "the granary of the Philip-

TAGALOG HOUSE — MINDORO

MANGYAN GROUP, WITH HOUSE — MT HALCON, MINDORO

pines," on account of the enormous rice crops raised in the fertile lowlands to the east and west of its central mountain chain, but the mohammedan pirates from the south preyed upon its civilized inhabitants, decimating the population; an epidemic nearly exterminated the buffaloes depended on for tilling the soil, and today the once fertile fields have for the most part grown up into forest land, while the coasts are peopled chiefly by escaped criminals from the neighboring islands, who find in the miasma of the forests a most effective ally against the troops which are from time to time sent against them. They band together and organize forays against the peaceable Spanish and native planters, and are a constant terror to the region around.

Even in the days of its greatest prosperity the cultivated district in Mindoro was restricted to a belt along the coast. The interior of the island stands today as it was in the beginning. Under the perpetual shadows of the mighty lowland forests, and in little clearings on the mountain sides, dwell a tribe of natives who show little kinship in speech or customs and none whatever in dress with the remaining Philippine peoples. They are called by the Spanish "Mangyanes" or "Manguianes," but I adopt their own pronunciation of their name, and call them *Mángyans*.

At the time of my first visit I was unable to learn anything as to conditions in the interior from the half dozen officials who with a few friars and a couple of Spanish merchants constituted the Spanish population of the island. I was informed, however, that the Mangyans were head-hunters and cannibals.

We began our explorations at a most unfortunate time. The rainfall is enormous in this island, and the rains were just beginning at the time of our arrival. The daily showers increased in duration and violence until they became almost continuous, and finally, after thirteen days and nights of uninterrupted downpour, we beat a retreat.

We returned to the island a second and yet a third time, however, and profiting by our first experience, began operations at the commencement of the dry season. By utilizing canoes where streams were sufficiently deep, and by tramping along their dry beds when water failed, we were able to quickly penetrate to the very center of the island. We found that most of the surface details given on our charts were incorrect, and explored two large rivers where, according to the charts, no rivers should have been.

The Mangyans fled at our approach, but we eventually succeeded in gaining their confidence, and found that the alarming accounts which we had heard of them had very little foundation in fact. They proved perfectly harmless when decently treated. The men were clad in the usual clout, and in that alone. The dress of the women is different from that of any other Philippine tribe. It consists of numerous coils of a cord braided of split rattan, or other similar vegetable substance, wound around the body at the hips and supporting a clout of bark. This bark is made soft by careful pounding between stones, and at a short distance it looks exactly like cloth. The cord is usually stained black, although a kind woven in black and yellow check is especially prized.

Girl babies are provided with two or three coils as soon as they can toddle, and the quantity is constantly added to as time goes by, so that the appearance presented by some of the old women is ludicrous in the extreme. This cord usually constitutes the only earthly treasure of the wearer, although the women sometimes ornament themselves with armlets or anklets of twisted rattan and beads made from the seeds of plants. Coins, copper wire, and bits of bright metal are highly prized as ornaments, but feathers are never used.

Married women are distinguished by the fact that they expose the breasts, while unmarried girls cover them with a peel from one of the plantains, ornamented with finely braided rattan cord.

During the dry season the lowland Mangyans often wander through the forest with no fixed place of abode. Where night overtakes them, there they sleep, each person making a shelter

MARRIED MANGYAN WOMAN, SHOWING TYPICAL COSTUME — MT HALCON, MINDORO

for himself by cutting off a couple of rattan leaves, fastening their buts together, and sticking them into the earth at such an angle as to give the leaves a suitable inclination. Under this quickly extemporized roof he sleeps, usually squatting on his heels.

When a company are planning to remain for several days in one place, they sometimes construct low thatched roofs, under

which they build sleeping platforms of small poles. Such structures are usually planned so that each accommodates but a single person, but they may be large enough for an entire family.

During the rainy season more elaborate, or at least larger, structures are erected, in which several families not infrequently find shelter; but even these more pretentious dwellings are, in the case of the lowland Mangyans, usually left without sides. The more thrifty mountaineers, however, build tiny huts which are both roofed and sided with palm or rattan leaves, and are

UNMARRIED MANGYAN GIRLS, SHOWING TYPICAL COSTUME — MT HALCON, MINDORO

provided with a single opening which serves the triple purpose of door, window, and chimney.

The cooking, which is of the most primitive sort, is done over an open fire built on a pile of earth in one corner of the hut. Fire is obtained by striking flint with a bit of steel or iron and catching the sparks on a bunch of dry plant hairs. When the necessary materials cannot be had for obtaining fire in this way, the rubbing together of two ingeniously shaped pieces of dry bamboo speedily accomplishes the desired end.

As a rule, Mangyans live on the forest products which they

NATIVE SAIL BOAT — MINDORO — MANGROVE SWAMP IN BACKGROUND

find at hand. The lowland people do not practice agriculture, but subsist for the most part on sago, which they get by felling the trees, cutting them into two-foot lengths, splitting these, pounding out the inner fiber with rude wooden mallets, running water through it to wash out the starch, catching the water in large leaves or rude troughs, allowing the starch to settle, and finally drawing off the water.

The starch may be eaten raw or toasted in an earthenware dish. Sometimes it is rammed, while still damp, into a joint of green bamboo, which is then put in the fire and allowed to remain there until nearly burned through, by which time the mass of sago has been converted into a solid roll, which would make an effective substitute for a policeman's billy.

The more vigorous and enterprising mountaineers have begun to practice, after a fashion, the art of tilling the soil. They have no other tools than the rude iron knives which they purchase from the coast natives and such wooden implements as they fashion for themselves; but with infinite pains they clear away small patches of forest, cutting through the trees at some distance from the ground, where the trunks are smallest.

After burning the felled timber, so far as practicable, they plant sweet potatoes or mountain rice in the ground thus laid bare. Sweet potato vines grow with such luxuriance as to practically exclude weeds, so that a patch once started lasts for several years.

It should not be supposed, however, that the Mangyan is a vegetarian. He fashions lance, bow, and arrows for himself, and makes the wooden tips of his weapons tremendously effective by dipping them in a virulent poison. No bird or beast is too filthy for him to eat. Fish eagles, herons, carrion crows, and buzzards are acceptable luxuries, while crocodiles and certain species of snakes are delicacies to be highly prized. The huge white grubs which bore in the trunks of the sago palms are regarded in the light of confectionery. I fancy that the starch with which they are filled turns to sugar as it is digested, giving them a sweet taste, but must admit that I have never demonstrated this point experimentally. The Mangyans eat them alive, with many evidences of great satisfaction, and evidently find the flavor delightful.

I have seen them devour with satisfaction the flesh of buffaloes which we had killed two or three days before. It was swarming with maggots and smelled to heaven, but they gorged

themselves with it until they could hold no more, getting up and running round from time to time in order to stimulate appetite and increase capacity. The grewsome meal ended, they lay down to sleep it off. Why it did not kill them I could never make out.

The lowland Mangyans signal to each other by pounding upon the roots of certain trees with large clubs, thereby producing a booming sound which can be heard for several miles under favorable circumstances. Their standard for measuring distance is based on the carrying power of the human voice, a given thing being so many "calls" away.

Their numerals usually stop at three, but their professors of mathematics are able to count up to twenty by making use of fingers and toes. As they always count in a definite direction,

MANGYAN STOREHOUSE FOR GRAIN — MT HALCON, MINDORO

each digit comes to have a permanent numerical value. In actual practice, if we desired to tell a man to return in five days, we used to tie five knots in a bit of rattan and direct him to untie one of them every morning until they were gone, and then return.

When shown their own photographs they failed to recognize themselves, although they at once pointed out the likenesses of their friends. They made the most ludicrous attempts to catch or find the persons who stared back at them from our pocket mirrors.

Adult women would entertain themselves for hours with rattles which we extemporized by putting a few shot into a small metal box. At Naujan lake the people came from miles around to watch the spinning of a top which we happened to have among our belongings.

They are fatalists. The most dire misfortune serves only to call forth the remark, "So it is appointed."

We never saw the slightest indication of worship of any kind, nor could we learn by the most diligent inquiry that they ever practiced anything of the sort. They deny belief in a life after death. Persons who fall seriously ill are deserted. A hut in which a death has occurred is abandoned, the corpse and everything in the hut remaining untouched. Relatives of a deceased person change their names in order to insure better luck. The morals of this simple people are astonishingly good. Although the women seem utterly destitute of any sense of modesty, unchastity is very unusual and adultery so rare as not to be provided for in their criminal code. Although they had every opportunity to steal from us, they never took anything but a little tobacco, and even this they explained was not exactly thieving, since they put it directly into their mouths and took only enough for their immediate needs! Guilt or innocence is determined by the old fire test. A person against whom there is serious suspicion is compelled to snatch from the fire a piece of hot iron. They profess to believe that if he is innocent he will not be burned. The death penalty is not inflicted. A murderer forfeits his property to the relatives of his victim. Polygamy is lawful for those who can afford it. All we could learn of the marriage ceremony was that "the old folks get together and talk."

The few half-hearted attempts which have thus far been made to civilize the Mangyans have proved abortive. The priest at

Naujan told me with deep disgust of the reply of a Mangyan to whom he had attempted to demonstrate the benefits of civilization and christianity. The unregenerate savage had replied that if he adopted civilization and became a christian it would cost money to be born, money to be allowed to live, money to marry, money to die, and money to be buried, and he considered himself better off as he was. Inasmuch as his statement of the case was strictly correct and as it was my observation that morality increased among the Philippine natives as the square of the distance from Spanish centers of "civilization," I could not but feel that this mountain philosopher had decided wisely.

THE TAGBANUAS OF PALAWAN

Palawan or, as the Spaniards call it, *la Paragua*, is the westernmost of the Philippine islands. Although some 300 miles long, it is very narrow, and there are a score of points where it could be crossed in a day; so that the only difficulties attending its exploration would be the obtaining of porters and food. The fact remains, however, that little is known about the island. The only Spanish settlement is a penal colony at Puerto Princesa, the capital of the island, although there are a few little military outposts in the southern and western districts.

The island is covered with magnificent forest, in which are to be found many woods of great value. There are also numerous "mines" of damar, which are worked a little by the natives. Like most of the large islands in the Philippines, Palawan has a central mountain chain extending in the direction of its greatest length. Toward the south the mountains are covered to their summits with vegetation, but at the north they are as jagged and bare as our own Rockies.

Three tribes inhabit Palawan. These are the Moros, or piratical mohammedans of the south, the mountain-dwelling Battaks of the north, who are said to resemble the Papuans, and the Tagbanuas, who occupy the central portion of the island and the northern coast region. Three distinct dialects are spoken by the Tagbanuas alone, and I was informed that in one instance the inhabitants of two towns 15 miles apart did not understand each other.

Mr John Foreman, in his excellent book on the Philippines, has rightly said that the Tagbanuas are little known. He further informs us that they never bathe intentionally, and that they eat their fish and flesh raw. Apropos of their not bathing,

TAGBANUA MEN — PALAWAN

I may say that the river in front of our house at Iwahig was full of children half the time, in spite of the crocodiles, while an afternoon stroll along the bank of a small stream near the village was quite sufficient to have convinced the most skeptical observer that men, and women also, bathe upon occasion. While I am not prepared to say that Foreman did not see them eat their fish and flesh raw, it is certainly true that during my sojourn among them I never knew them to touch uncooked animal food.

The men are of medium height and are often fairly well developed physically, although skin diseases, digestive troubles, fevers, and starvation keep many of them in wretched condition. Young girls are frequently possessed of considerable comeliness, but they often marry in childhood, and they mature and age rapidly.

The Tagbanuas are a dark-skinned people. With many of them the hair shows a decided tendency to curl. It seems probable that they are a hybrid Aëta-Malay race.

Their dress is a rather unsafe subject for generalization. Many of the men wear clout alone. In the south, where they have

TAGBANUA WOMAN AND CHILDREN — PALAWAN

come more or less in contact with the Moros, they have in some instances adopted the trousers, tight jacket, and turban of the latter tribe, while near Puerto Princesa a few of the men are the proud possessors of cast-off articles of European dress. In approaching the Spanish town they carry their fine clothing under their arms until at its outskirts, and then dress beside the road. Women, when at work, wear a strip of cloth wound around the body and reaching from waist to knee. Most of them possess in addition a longer skirt and a semi-transparent shirt for state occasions.

Agriculture is more commonly practiced than among the Mangyans, but many of the men live for the most part in the forest, where they hunt, trap, and search for damar, wild honey, and wax. The structures in which they make their abode at such times hardly deserve the name of houses. They consist of leaf roofs, with a platform of poles underneath, and are usually large enough to accommodate an entire family. Under the sleeping platform a smudge is maintained to drive away insect pests, and it is common to see a whole family squatting contentedly in smoke that would asphyxiate a white man. A few empty cocoanut shells, some baskets for burden-bearing, and two or three earthen pots complete the list of household effects. Unlike the Mangyans, they work iron to some extent, constructing rude forges, with piston bellows made from large bamboo stems.

Although much of the Tagbanua's time is necessarily spent in the forest, he is naturally social, and especially during the long rainy season he seeks the society of his fellows, returning to his hut in some one of the numerous large villages.

The village houses are built of bamboo, nipa palm, and rattan, and differ from those of the civilized natives only in their smaller size, and in being perched at a much greater elevation above the ground. One often sees a young couple working away contentedly at their future home with no other tools than their fingers and a rude knife.

In the villages near Puerto Princesa there exists a travesty of the form of local government found among the civilized tribes, each village being presided over by a *gobernadorcillo* or petty governor, assisted by a "justice of the peace," and other more or less useless officials. No taxes are collected, however, and few burdens are imposed on these partially civilized Tagbanuas by the Spanish, who are trying to gradually accustom them to the yoke, in the hope of eventually bringing them to the full

dignity of citizenship, which to the Philippine native means merely the paying of crushing taxes without receiving any adequate return.

A little distance from the Spanish town I found the people friendly and unsuspicious. They informed me that "in the early days" they were governed by a great chief, chosen by the will of the people, who held office for life. If he proved a good ruler, his eldest son was allowed to succeed him; otherwise a new chief was chosen.

BISAYAN NATIVE AND HOUSE — SALAG DAKO, GUIMARAS ISLAND

At present, however, there is no ruler for the whole tribe. The affairs of each community are directed by a council of elders, who administer justice according to their own ideas, with little regard for Spanish customs and requirements.

The method employed to determine the guilt or innocence of a person accused of crime is both novel and effective. The old men conduct accused and accuser to the bank of some deep pool, and there, in the presence of relatives and friends, the two dive into the water at the same instant. The one who remains longest beneath the surface is adjudged to have spoken

the truth. Theft is punished by the infliction of a fine equivalent to twice the value of the stolen article. If the culprit be too poor to pay the fine, he is whipped. A murderer is killed by the relatives and friends of his victim. In a case of adultery an injured husband may kill both his wife and her paramour, but may not kill the one and not the other. If not murderously inclined, he can collect a heavy fine.

A father with marriageable daughters sets a price upon each. Whoever wishes to marry one of them must pay the price demanded. Should a father object on personal grounds to a suitor willing to pay the prescribed price, he must himself pay a fine to the suitor by way of balm to his injured feelings.

Child marriage seems to be the rule. Women are apparently less numerous than men, and their hands are much in demand. A curious reversal of this state of affairs exists in the island of Cuyo, where it is said that more than ninety per cent of the population are women. This remarkable result is not due to any abnormality in the birth rate, but rather to the fact that the men all run away as soon as they get large enough. The Tagbanua women are well treated and are allowed a considerable amount of personal liberty, but are expected to do their full share of hard work. It is not unusual for a woman to bathe and go about her customary duties the day after bearing a child. The Tagbanuas have a secret medicine for use at the time of childbirth, the nature of which they guard with the most jealous care.

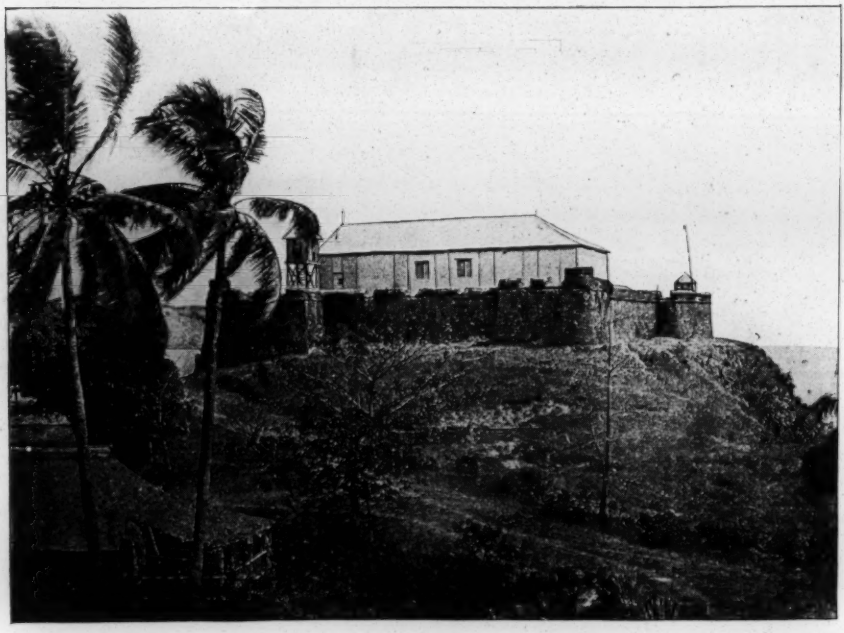
When a death occurs the relatives set a time for the funeral. At the appointed hour the house of the deceased is torn down and his body is carried to the woods and buried in the earth. Dishes and earthen pots belonging to him are broken over the grave to mark it.

The Tagbanuas have a simple syllabic alphabet, which is in common use. The characters are scratched on smooth joints of bamboo in vertical columns.

Much might be added in regard to each of the people discussed, but enough has been said to give some idea of the methods of life and of the general characteristics of two fairly typical savage Philippine tribes. What holds true of them will hold in a general way, *mutatis mutandis*, of the other wild peoples. They are as a rule extremely ignorant, but harmless and inoffensive so long as they are well treated.

They will afford an interesting problem in civilization to the nation whose flag is in future to float over their islands. They

will also afford a most interesting study to the anthropologist, and it ought to be made before the record of the daily life, the thoughts, and the ideals of these harmless and simple children of nature has been forever blotted out by the encroachment of that new order of things which is sure to follow when the blight of Spanish domination is finally removed from the islands.



OLD FORT, WITH CHURCH INSIDE — CULION ISLAND

COMMERCE OF THE PHILIPPINE ISLANDS

During the year 1896 the total foreign commerce of the Philippine islands amounted to $30,806,250, the exports amounting to $20,175,000 and the imports to $10,631,250. Of the total foreign trade, that with the United Kingdom amounted to $9,934,590, that with the United States to $5,145,303, that with France to $3,782,800, with Japan to $1,486,691, with Germany to $968,628, and with other countries, including Spain, to $9,488,238.

The ratio of imports to exports, among these different countries, varied in a very striking and highly significant way. While the United States purchased 4,982,857 dollars' worth, or 24.6 per cent, of the exported products of the islands, she sold to them

in return only 162,341 dollars' worth of the products of her own mills and mines and forges. From the United Kingdom, however, the islands purchased commodities to the value of $2,467,090, or about one-third of the value of their exports to that country. France sold to them almost as much as she bought from them, while Germany sold them more than three times as much as she took from them.

The principal articles of export are manila hemp, sugar, copra, and tobacco. During the ten years ending June 30, 1897, the average annual exports of sugar were 301,814,668 pounds, of which the United States took annually an average of 167,414,906 pounds and the United Kingdom an average of 128,145,274 pounds, the United States taking a larger amount than the United Kingdom six years out of ten. The exports of sugar attained their maximum in 1889, when they amounted to 408,722,161 pounds, of which the United States took 284,654,552 pounds, or 69.6 per cent, and the United Kingdom 113,143,941 pounds, or 27.7 per cent. In 1897 the total amount exported was only 153,576,125 pounds, of which the United Kingdom took 106,578,638 pounds, or 69.4 per cent, and the United States 43,261,182 pounds, or 28.2 per cent.

During the same period of ten years, 1888 to 1897, the total exports of manila hemp averaged 651,897 bales per annum, of which the United Kingdom took an average of 380,767 bales and the United States an average of 265,344 bales, the United Kingdom taking a larger amount than the United States seven years out of ten. The exports of this product reached their maximum in 1897, when they amounted to 825,028 bales, of which the United States took 417,473 bales, or 50.6 per cent, and the United Kingdom 385,182 bales, or 46.7 per cent.

Copra is exported mainly to the continent of Europe, the shipments in 1897 reaching a total of 801,437 pounds. The same year the exports of leaf tobacco amounted to 69,803,325 pounds, of which exactly 80 per cent went to the continent of Europe. The cigars exported aggregated 156,916,000, of which 81,670,000 went to China and Japan. There were no shipments of leaf tobacco to the United States, and the cigars exported to this country amounted only to 2,285,000.

The chief imports of the Philippines are rice, flour, dress goods, wines, coal, and petroleum. Of the exports from Spain to the islands in 1896, the cotton fabrics alone were valued at $4,915,851, and of the British exports for the same year cotton manufactures and yarn had a value of $1,494,108. In the exports of the United

States to these islands, however, the various manufactures of cotton figure only to the extent of $9,714! Manufactures of flax, hemp, wool, and silk appear in the Spanish exports to the value of $286,841, or 76.7 per cent more than the entire export trade of the United States to the islands in the year in question. The exports of paper, leather, and wood from Spain in 1896 had an aggregate value of $585,120, or nearly four times that of the total exports from the United States. All these products, as well as others that might be mentioned, could just as well be supplied from this country.

Of what the exports and imports to and from the United States principally consist is shown in the following tables. The insignificance of almost every item in the table of exports suggests, in conjunction with the foregoing statements, the enormous possibilities of an extended commerce that now lie within our reach as a nation:

Values of domestic merchandise exported from the United States to the Philippine Islands during the years ending June 30, 1893–1897.

Articles.	1893.	1894.	1895.	1896.	1897.
Wheat flour	$7,800	.....	$11,250	$18,290	$10,068
Chemicals, etc	1,667	$1,453	320	3,390	3,316
Cotton, manufactures of	8,444	45,761	3,355	9,714	2,164
Iron and steel, manufactures of	9,006	16,388	13,343	10,204	9,655
Oils, mineral, refined	105,936	35,325	67,837	89,958	45,908
All other articles	21,525	46,539	23,150	30,785	23,486
Total domestic exports	154,378	145,466	119,255	162,341	94,597

Values of merchandise imported into the United States from the Philippine Islands during the years ending June 30, 1893–1897.

Articles.	1893.	1894.	1895.	1896.	1897.
Sugar, cane and other	$2,865,966	$3,655,627	$1,111,006	$2,270,902	$1,199,202
Textile grasses:					
Manila	6,217,192	3,324,223	3,572,236	2,499,494	2,701,651
All other	.....	.....	11,851	68,838	384,155
Oils	11,221	3,041	.....	6,237	1,820
Straw, manufactures of	29,039	12,353	26,148	81,352	72,137
All other articles	36,439	13,098	10,125	56,034	24,775
Total imports	9,159,857	7,008,342	4,731,366	4,982,857	4,383,740

J. H.

THE DISPOSITION OF THE PHILIPPINES

The following forcible article by Mr Charles E. Howe is taken from *The Financial Review* of May 27:

What commercial benefits can accrue to any European nation in purchasing these islands which will not accrue to us? Since we are well able to retain them, would it not be a short-sighted policy to dispose of them? With Hawaii and the Philippines, we shall control the trade of the Pacific. With Japan as our ally and England as our friend, we have nothing to fear from other foreign nations. What claim can any power advance, or by what right can they demand that our government evacuate these islands? None!

Our government can no longer pursue a policy of isolation. The times demand that we take our rightful position among the nations of the world, and especially in the unfolding commercial possibilities of the East. There await untold advantages to the nation which encourages the awakening of the Orient from its long sleep and assists it in taking a prominent part in its trade relations with other nations. Are we to refuse to seize this golden opportunity and allow some European power to outwit us? We cannot afford to barter away our newly acquired territory for a few pieces of silver.

What other form of government will do more to civilize these natives than our own? It may be said, "What shall we do with the natives of these islands?" I may ask, "What will any other nation do with them?" What are we to do with the natives of Hawaii? What of our responsibilities with the inhabitants of Cuba and Porto Rico? Our responsibilities will be practically the same in all these cases. The truth is, we are face to face with a new foreign policy for America. We must meet it and not shirk it!

The welfare of our nation lies largely in the development of our trade with the nations south of us and the countries of the far East. We cannot hope for any wonderful expansion of our manufacturing trade with Europe. From the West Indies, South America, China, and Japan we can rightfully expect a marvelous growth of trade, and especially a demand for our various manufactured goods.

We shall find that this war will result in untold advantages to the United States. Our aim was to banish Spain from the Western continent and free an oppressed people. Our reward is the unexpected acquirement of territory and control of the trade of the Antilles, and a foothold in the development of the Orient. If Spain never pays our government a farthing for the cost of this war, still we shall be well repaid in a very few years from the revenues to be derived from these several countries.

Our policy in the future must be an aggressive one. Our markets must be the world and our base of supplies the United States. All Europe recognizes this newer policy as the only true one for the healthy growth of nations. From a political, naval, and industrial standpoint, we must retain our new territory.

In connection with the annual meeting of the National Educational Association, to be held next month in Washington, a geographic exhibit, illustrating the physiography, geology, ethnology, climate, and industries of the United States, will be on view at one of the city school buildings July 7 to 12, inclusive.

The publishers of Leslie's Weekly will send that well-known illustrated newspaper from now until October 1 for only $1.00, which is little more than half-price. Leslie's Weekly has staff artists at all points of possible conflict in the war with Spain, and it offers to its readers for a merely nominal sum an admirable pictorial and literary history of the war.

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A recent number of the Medical Record contained a notable article on the Asheville Plateau in the Mountains of Western North Carolina, by S. Westray Battle, M.D., U.S.N., in which the attractions of that famous region are admirably set forth. The Asheville Plateau or "The Land of the Sky," to give it the name by which it is popularly known, is from 2,000 to 2,500 feet above sea-level, and contains a large number of peaks from 4,000 to 6,000 feet and upward in height. Its scenery is highly diversified, and its climate as healthful as it is delightful. The Southern Railway, which has done so much to popularize this region by its admirable train service, will furnish any information that may be required by intending visitors on application to any of its agents.

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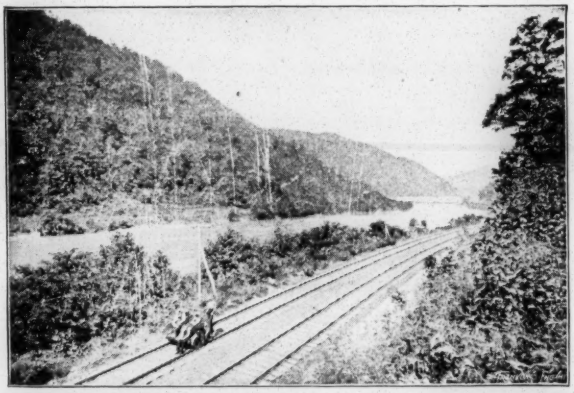

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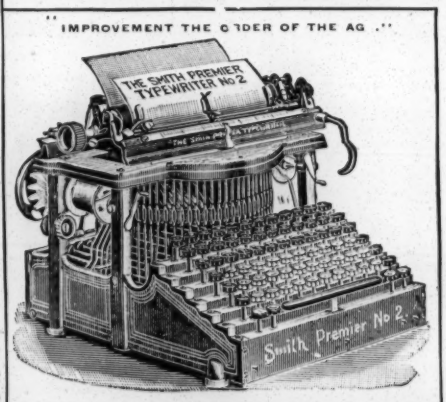

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